

TUCSON, ARIZONA'S BUSTLING CITY

Chamber of Commerce Splendid Active Force.

IRRIGATION IS A FACTOR

Desert Land is Reclaimed by an Abundance of Water and Made to Yield Fine Crops—Churches, Schools, and Fine Homes.

By Randolph Churchill, in The South Bend (Ind.) Tribune.

Tucson, Ariz., June 23.—This has been one of the most interesting visits the present writer has ever made to any unknown country, a vast domain almost unappreciated and certainly misunderstood by the big army of Americans who crave a castle of their own. When Arizona was begging for statehood regardless of New Mexico's claims a distinguished senator who never trod the soil west of the Missouri river said: "I am not in favor of giving an arid sand desert with a few mining camps two voices in this august body," and somehow this is about as much as many people know of this wonderful state which has now over 250,000 inhabitants, 113,000 square miles and minerals, soil and climate all its own.

Arizona lies in America's big semiarid plain, to be sure, but it is far from being a domain of barren rocks and sand, sun beaten sterile acres with a few fast decaying mining camps and here and there an unkept ranch as we sometimes hear. When leaving El Paso the other day a friend said: "Why, don't try to stop in Arizona; it will be so hot you can't stand it and there is nothing to engage your pen," and as this was one of the four states in the great republic which I have not traversed and written of I was determined to break my journey to the Pacific at Tucson.

The little dilapidated mining camp made famous in story and wild west so-called literature of which one hears so much was not to be seen, but the bright new and growing city of Tucson was in evidence the moment the Pacific express pulled into the depot. However, I had to witness the going of my predilections and it was hard for me to realize that I was going about, amid well paved avenues of beautiful residences and fine public buildings as well as business like blocks, one of our most beautiful and fascinating little cities.

Ideal, Busy Little City.

The rough mining camp with its saloons, gambling hells and undesirable inhabitants had been metamorphosed into an ideal little busy metropolis as pretty as it is sober and quiet. Surrounded by its mountains, under its sublime blue sky and made verdant and green by trees, flowers and gardens Tucson is anything but a dilapidated mining camp; in fact, a more beautiful and industrious city of 20,000 souls would be difficult to find.

Arizona has much waste land and its sun burnt sand plains and rocky mountains will never invite habitation except for the precious mineral deposits in its hilly fastnesses, but notwithstanding all this, much of its many millions of acres are fertile when irrigated as the delta of the Nile.

In the making of this wondrous nation the provincialism of many great minds is nowhere better shown than in the extension of its domain, for did not some statesman claim that the states should not go west of the Alleghenies, and the Louisiana purchase was combatted, while the accession from Mexico of this now famous and mineral producing section, including Arizona, California, New Mexico, etc., was bitterly op-

posed by senators and members of the house?

Had these men succeeded in closing the door to this part of the American acreage the republic could not boast of its precious mineral supremacy, its greatest fruit belts and its irrigated agricultural sections rivaling the low lands of the Netherlands and the delta of the pyramids.

Of course, this old section in Indian lore and territorial history is practically a grand new country as only a small portion of Arizona is finished; the genius of the engineer has brought fruition and splendor to many little zones of agricultural fertility by the use of dams, wells and pumps sufficient to demonstrate the great possibilities of the "baby state" which joined its sisters in the race for highest honors less than four years ago.

Mineral Wealth of Arizona.

The mineral wealth of Arizona in copper, zinc, lead, gold and silver are beyond present computation. Of copper the United States produces one-half of the world's supply, while Arizona gives out of its opened mines nearly one-fourth.

In the production of livestock the big pastures of this new state are helping to feed the world, while its forests in many sections "upon a thousand hills" tell us that there is something here other than barren sand plains, rocky hills and cactus wastes.

Since this section lies in America's great semi-arid domain, rains falling mostly in July, agriculturist must depend upon proper irrigation, but we should bear in mind that when the soil is capable of irrigation and the cost of it being comparatively cheap as in Arizona that this condition affords the farmer, the truckman and the fruit grower a veritable paradise.

Some time ago I told the readers of The Tribune from Albany, Ga., about their wonderful pecan industry and now away out here in the southwest I find another new thing under the versatile American sun—an English walnut growing section of marvelous possibilities, covering the great and fertile valley of Santa Cruz of which Tucson is the center. An experimenting mind, C. R. Biederman, discovered this industry recently by finding it an easy task to graft the English walnut on the native black walnut as is done in California and has thus given this section another industry of vast possibilities.

This discovery is now being perfected commercially by Gen. Manning, who is planting 1,000 Arizona black walnuts on 160 acres of the Scotch farms, and will have the English walnut grafted on them next spring by Mr. Biederman, who will get the scion wood from imported California trees.

Forerunner of Great Industry.

That the walnut grove at the famous Scotch farms will be the forerunner of another great industry throughout the Santa Cruz valley no one doubts. Of the black walnut, while it is not such a commercial asset as the English variety, yet it is valuable and abounds in Arizona.

A magnificent native walnut tree is pointed to by Senator Mark Smith as an example of the results that follow proper irrigation. This tree came from one of the gullies near the river and was about as large as his arm in 1898, when he planted it upon his residence grounds. Today it is a big shade tree producing black walnuts in plenty.

I want to call the reader's attention to one of the most remarkable irrigation projects I have seen either on this continent or anywhere—the project of the Tucson Farms company which surrounds the city of Tucson. In just three years this company has taken 12,000 acres

of mesquite covered wilderness, cleared and developed water for the tract, and made it over into alfalfa, corn and grain fields, garden patches, dairies, walnut groves and cotton fields. Here is the story of how it was done:

One of Tucson's enterprising citizens, a banker and at the time the president of the Chamber of Commerce, induced one of the government engineers stationed in Arizona to make an investigation of the underflow of the Santa Cruz river which runs past Tucson. The Santa Cruz river flows several feet under the sandy surface except during flood periods. This engineer's report was so encouraging that it was immediately submitted to Chicago capitalists who had developed irrigation projects in Texas, Colorado and Oregon, who in Tucson had their own engineers make further investigations, following which they purchased the land and began to clear and develop it.

How Water is Obtained.

The water was secured by digging a ditch 20 feet deep across the channel of the Santa Cruz river at a point where its channel was confined to the width of a mile between mountains and foothills. Nineteen 16-inch wells were drilled 200 feet apart, the proper distance having first been determined by a most thorough test of the quantity of water available and the water bearing area affected by pumping. High power irrigation pumps and electric dynamos to operate them were installed and a concrete conduit connected with each well. This conduit was set nine feet under the first water bearing strata so that the pressure from it would draw a considerable portion of the year.

The water so secured is carried in concrete ditches to the land to be irrigated and it is carried and used in winter as well as summer, for in this climate farming is a 12 months' industry. There are no idle months when the stock must be fed from the hay and grain raised during the summer; there are no snow and heavy frost to make the land lie fallow and keep the farmer prisoner in his house. Here the dairy cattle feed on growing alfalfa the year round, hogs are in pasture in February and March, garden truck is raised in January and the fields are growing barley to be cut in April and followed with corn and other summer crops. The farmer's wife can have her flower garden in continuous bloom and pluck roses as well as chrysanthemums for her Christmas decorations. The farmer at Tucson does not get gray worrying about a possible drought or whether he will get water in time to make his crop. He knows that water is ready for his use when he wants it.

Farming in this section is not pioneering. On the project of the Tucson Farms company every farmer's home is electric lighted and has running water and telephone. Schools are conveniently located. The children can start in the kindergarten and go through the state university at Tucson without leaving the parental roof. In the city there is every denomination of church represented. And when supplies are needed, anything from a pin to a reaper, they can be purchased in Tucson.

Acres Susceptible to Irrigation.

This project I have mentioned does not embrace all the farming land at Tucson, but it is the only developed project under which the homeseeker may purchase land on easy terms in crop and fully equipped. An Indiana man from Bedford, has already taken off his land a crop yielding a handsome profit.

Besides this project there is the Canoa ranch with several thousand acres susceptible to irrigation, partly developed, and

other small tracts in both the Santa Cruz and Rillito valleys, and there are poultry and fruit ranches upon the mesa, or higher land, which are sources of splendid income to their owners.

To put it briefly, agriculture and horticulture in their various phases, are giving Tucson a very rich back country which a few years ago was unproductive and called by the ugly name "desert." It is a safe assertion that to find "desert" at Tucson in a few years the traveler will need to travel quite a distance beyond the city.

This city is situated 300 miles west of El Paso, Tex., and 500 miles east of Los Angeles, upon the main line of the great Southern Pacific and also is the western terminal of the new El Paso and Southwestern railway; it enjoys an altitude of 2,400 feet and is nestled in the rich Santa Cruz valley with timbered mountain all about it and is probably the largest city in the state.

City's Streets Well Paved.

The streets are well paved and the business blocks and public buildings would do justice to a much larger city, while many of the residences are beautiful indeed, having outgrown even a suggestion of a western mining camp town. The state university has exquisite grounds, beautifully planted in trees, flowers and botanical gardens with fine buildings costing \$400,000, with a splendid faculty and over 300 students, which speaks volumes for the "baby state." There are seven public parks, a Carnegie library, six public school buildings, two Indian schools, four hospitals, a Y. M. C. A. and thirteen churches.

The United States magnetic observatory and the Carnegie desert botanical laboratory are fine institutions. There are four miles of street railways, eight hotels, four banks, while several of the many retail stores are big houses, Albert Steinfeld & Co., being one of the largest wholesale and retail stores in the southwest.

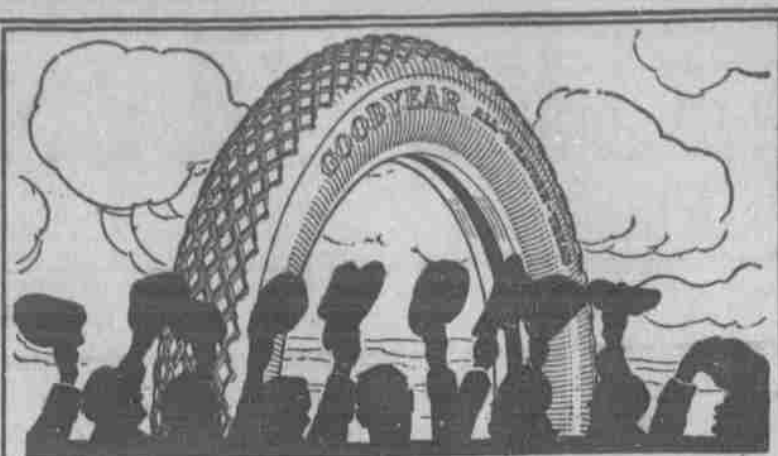
As this is a great stock market Armour & Co., Swift & Co., and Libby, McNeil & Co., have plants here. The four wholesale houses carry stock valued at \$800,000 and do a fine business. The banks have deposits of over \$4,000,000, with combined resources of some \$8,000,000, which gives this little city financial standing of no mean value.

The S. P. railway offices and shops located in Tucson employ 250 men and pay out for wages monthly over \$200,000. The daily newspapers of the city, the Tucson Citizen and the Arizona Daily Star, are splendid journals of commanding influence. There are four mills, two big ice plants, a gas and electric light plant, local and long distance telephone systems, many mining and pumping machine houses, machine shops, carriage and saddle factory, large brick yards and a foundry in Tucson.

Splendid Chamber of Commerce.

The city boasts of a splendid Chamber of Commerce which eaves nothing undone for Tucson and Arizona which is in its power to accomplish. The president is Gen. L. H. Manning, one of the state's ablest business men, and the secretary is John F. Myers, who came here three years ago from Ohio and, true to his native state, he is doing things worth while in this western city of wondrous opportunities.

It gets hot out here, but the atmosphere is so clear and dry and the water so pure that one soon enjoys the place, and if its days of sunshine are almost 365 in the year, and if its summers are hot, yet its nights are cool and its climate sublime. With perfected systems of irrigation this country will some day find itself



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MOSQUITO CARRIES MALARIA FEVER

Doctor Ravenel of the University of Missouri Tells of Insect Disease Carriers.

"In addition to being pests, many insects are carriers of disease," said Doctor M. P. Ravenel, professor of bacteriology and preventive medicine at the University of Missouri.

"Some insects, such as the ordinary house fly, act mechanically as filth carriers," continued Doctor Ravenel. "Other insects act like a syringe, mechanically drawing blood from sick persons and injecting it into other persons sick or well. This is also true of animals among which heavy losses are often due to bites of insects. Texas 'ever, which causes a loss to the farmers of the South and the cattle trade of at least \$60,000,000 per year is carried by a tick."

"In man the most important disease conveyed by insects in Missouri is malarial fever. The germ, which belongs to the animal kingdom, is in the blood. The mosquito in biting draws the young parasites into its stomach where they undergo a stage of development which requires about twelve days. During this time they multiply enormously and finally reach the salivary gland of the mosquito. Then the bite injects the germ into the person bitten, and infection takes place."

"The breeding of the mosquito should be prevented. This insect always lays its eggs in stagnant water. These hatch and produce the well-known wigglers. Where the water cannot be drained, the surface of such pools should be covered with crude oil, which fills the breathing apparatus of the larvae and kills it by suffocation."

"In rooms where sick persons are kept all windows should be screened, or mosquito netting placed over the bed of the patient. The mosquito does not naturally harbor the disease, but must get the germs from a sick person."

"Those persons who are obliged to go into mosquito infected districts can protect themselves by the use of oils, such as the oil citronella and oil of penny-royal, which are repulsive to the mosquitos. It is also well to take quinine, if the district is known to be infected with malaria. The average dose should be five grains each day, but a physician should be consulted as to the amount to be taken."

Doctor Ravenel said malaria was very common a few years ago in Southeastern Missouri, but that it had practically disappeared where the lands have been claimed for cultivation.

"It is curious that people will do so much more for commercial purposes than they will for public health," said Doctor Ravenel.

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